

***TIMBER SALE REPORT AND APPRAISAL
MOCKINGJAY TIMBER SALE
Sale Number - 13502***

***REGION TWO
SAN JUAN NATIONAL FOREST (13)
MANCOS-DOLORES RANGER DISTRICT (05)***

Prepared by: _____
Matt Rathbone – Forester

Date: _____

Recommended by: _____
Mark Krabath – Supervisory Forester

Date: _____

This sale complies with section 6 (g) (3) (E)-(F) of the National Forest Management Act of 1976, 36 CFR 223.1, the San Juan National Forest Land and Resource Management Plan approved 09/29/83, amended 05/12/92, and the Decision Notice for the Chicken Creek Fuels Reduction and Forest Health Restoration Project dated 03/27/2008.

Approved by: _____
Derek J. Padilla - District Ranger

Date: _____

SUMMARY OF RECOMMENDATIONS

Contract Type: 2400-6T

Specified Road Cost: N/A

Sale Volume: 718 CCF

Road Completion Date: N/A

Method Of Sale: Sealed Bid, 30-day ad

Sale Termination Date: March 31, 2015

Normal Operating Season: May 20 to November 30

Method of Measurement: Premeasured

Deficit Sale: No

Bid Guarantee: \$ 100

Minimum Performance Bond: \$ 700

Operations Fire Liability: \$2,600

Rate Adjustment: 100% up/down

Advertised Minimum Bid Rates:

SPECIES – PRODUCT	ADVERTISED RATE
Live Ponderosa Pine Sawtimber	\$ 1.08
Live Ponderosa Pine P.O.L.	\$ 1.00
Total Appraised Advertised Timber Value	\$ 772.08

Summary and Location

This Mockingjay Timber Sale Contract is part of the larger Chicken Creek Fuels Reduction and Forest Health Restoration Project area. This project was developed under the Healthy Forest Restoration Act of 2003 to create vegetation structure and fuels conditions where wildfire behavior is consistent with the protection of lives, firefighter safety, infrastructure, local communities, watersheds, and other resource values. As part of this project, commercial timber sale and/or stewardship contracts were planned to treat approximately 1,500 acres. Poor market conditions for ponderosa pine have hindered efforts to implement this aspect of the project, but this contract is designed to harvest one unit of about 60 acres in a manner which we believe will be economically viable to the local markets. The unit will be treated using a commercial thinning prescription with conventional ground-based mechanized logging systems.

The Mockingjay Timber Sale is located on the Mancos-Dolores Ranger District, San Juan National Forest. The sale is approximately 5 miles north of Mancos, CO. The primary access route to the Sale is north from Highway 184 on County Road 41 (Chicken Creek Road) and Forest Service roads 385 and 385.D. The gross sale area is an estimated 150 acres.

Legal Description: Portions of Sections 32 & 33, Township 37 North, Range 13 West, New Mexico Principal Meridian, Montezuma County, CO.

Decision Notice Summary

The District Ranger approved the Decision Notice and Finding of No Significant Impact for the Chicken Creek Fuels Reduction and Forest Health Restoration Project on March 27, 2008.

The decision as stated in the Decision Notice is:

“Approximately 1500 acres of ponderosa pine will be harvested through commercial timber sales utilizing a restoration prescription on 15 different units. Small diameter pine (<10” dbh) will be pre-commercially thinned by hand (using chainsaws) in 9 treatment units, totaling 164 acres. Three treatment units totaling 434 acres will be thinned using a hydromower. Prescribed burns will be conducted on all treatment units within 1-3 years after mechanical treatments are completed. In addition, all harvest units from the Millwood Timber Sale in the late 1990s are approved for prescribed burning by this decision.

Other actions associated with the implementation of the proposed action include:

- Existing unauthorized roads that are needed for fire management will be decommissioned after the initial prescribed burn.
- All unauthorized and temporary roads used by the purchaser are to be decommissioned following logging activity.”

Required Mitigation Measures & Design Criteria for Mockingjay Timber Sale

The following conditions will be included in the Timber Sale Contract in order to implement management requirements, mitigation measures and design criteria detailed in the Chicken Creek Environmental Assessment and Decision Notice, Forest Plan Standards and Forest Service Timber Sale policy.

Timber Harvest

Restrict hydro-mowing and timber harvest activities during periods of spring snowmelt and periods of heavy rain when soils are too wet. Soils are too wet when vehicle ruts exceed 4 inches depth for 10 feet or more.

- *Equipment shall not be operated when ground conditions are such that excessive damage will result. (reference BT6.6 - Erosion Prevention & Control)*
- *All hauling and operations will be restricted annually from February 15th thru April 30th to prevent soil damage during periods of soil saturation associated with seasonal snowmelt/thawing. (reference CT5.12# - Use of Roads by Purchaser; CT6.312# - Sale Operations Restrictions)*

Do not drive machinery in riparian areas. Do not reduce/mechanically treat riparian-wetland vegetation. Establish 50-foot no treatment buffer zone around riparian-wetland areas.

- *Riparian and wetland areas were avoided during cutting unit layout and temp road planning.*

Temporary roads not used for fire management must scarified, reseeded, covered with debris, and effectively blocked after treatment.

- *Purchaser is required to obliterate and/or close all temporary roads, skid trails and landings per our specifications. Purchaser is required to seed bare areas such as skid trails, landings and temporary roads using a specified native seed mixture. (reference CT5.34# - Obliteration of Temporary Roads, Skid Trails & Landings; CT6.601# - Erosion Control Seeding)*

Wildlife Habitat

Considerations for wildlife and visuals will include Abert's squirrel nest tree clumps designated at one clump per 6 acres and a turkey roost tree clumps at 1 per 20 acres. An Abert's squirrel tree clump is defined as a group of 6-12 ponderosa pine trees(9-22"DBH) with interlocking canopies on about 1/10 ac with a minimum of 1-2 trees 16"Dbh trees in that group. Basal area should average 160-220 sq ft/ac. A turkey roost tree clump is similar to the above squirrel clump but would have a minimum of 6 16" DBH pine trees on at least 1/10 ac.

- *These measures were included in the marking guides and squirrel/turkey clumps were marked as prescribed above and a count was tallied. Documentation of the number of clumps marked by unit is included on the marking guide inspection sheet, which is available in the district pre-sale folder.*

If a goshawk nest is found, a 30-acre no-harvest buffer zone will be used around active and inactive nests. A no-activity buffer of ¼ mile around active goshawk nests will be established from March 1 - August 15 to protect potentially nesting goshawks from project activities. Personnel involved in timber sale preparation and prescribed burning should be trained in northern goshawk species and nest identification. This will allow project personnel to become familiar with goshawks and to conduct nest searches during layout activities. Any suspected goshawk nests should be brought to the attention of the District Wildlife Biologist. The biologist may choose to permit some activity if the birds have become habituated to human activity. If this habituation exception is granted, the biologist will monitor the area to determine whether the permitted activity has negatively affected the birds.

- *Pre-sale personnel are trained in Goshawk ID. No goshawks or nests were discovered in pre-sale activities. In the event that sites are discovered after sale award, the Contracting Officer may interrupt the Purchaser's operations. (reference BT6.24 - Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources)*

Snags: Protect all snags (>12" Dbh and >15 feet height) per Forest Plan direction (current direction is two per acre). If these snag densities do not exist prior to treatment, green snag recruits should be reserved for future snags. These green snag recruits may have broken/dead tops, loose bark existing cavities or lightning scars.

- *All snags ≥12 "DBH and ≥15 ft high and appropriate snag recruits were marked as wildlife trees with an orange "W" and a stump mark. These snags as well as green snag recruits will be protected as "reserve" trees in the timber sale contract. Snags were tallied and the tallies are located on the marking inspection form, located in the district pre-sale folder. (reference CT2.3# - Reserve Trees and CT6.32# - Protection of Reserve Trees)*

Rangeland Resources

All range improvements would be protected during harvest. Loggers would be required to keep fences in good repair during operations. Wherever possible, the purchaser should use existing gates for access to cutting areas. No fences are to be cut unless absolutely necessary and agreed to in writing by the Forest Service. In most cases where fences lie within cutting units, design skidding patterns to be parallel to fence lines, to pull timber away from fences, or to go through existing gates. In the event temporary roads and skid trails are needed to cross fences at other than existing gate locations, these breach points must be double H-braced on each side of the cut and closed with wire or a gate. Any fences damaged by loggers would be the responsibility of the timber purchaser to repair immediately.

- *Purchaser is required to protect and/or repair all improvements. Fences shall not be cut unless the fence has been properly braced to prevent loss of tension. (reference BT6.22 - Protection of Improvements; CT6.223 - Protection of Fences)*

Noxious Weeds

All heavy equipment (including hydromowers) will be pressure washed at an offsite location prior to entering the project area. Pickup trucks and passenger vehicles are not subject to this requirement. If heavy equipment is removed from the project area, it will again be pressure washed at an offsite location prior to re-entering the project area.

- *All off-road equipment will be required to be cleaned prior to moving onto the sale area. (reference BT6.35 Equipment Cleaning)*

Landings, staging areas, skid trails, decommissioned and closed roads, fire lines, and temporary trails will be seeded using a native species mix that contains no noxious weed seed and meets certified seed quality. The seed mix species will be approved by the Dolores Public Lands Office.

- *Purchaser is required to obliterate all temporary roads, skid trails and landings per our specifications. Purchaser is required to seed bare areas such as skid trails, landings and temporary roads using a specified native seed mixture. (reference CT5.34# - Obliteration of Temporary Roads, Skid Trails & Landings; CT6.601# - Erosion Control Seeding)*

Cultural Resources

Any 'Eligible' or 'Need Data' sites within the project area will be avoided by project activities. If any additional cultural resources are discovered during project activities, activity at that location will cease immediately and the District Archaeologist will be notified. The discovery would then be recorded and assessed, and the appropriate mitigations and consultations would be completed. The decision on whether to continue implementation at that location would be based on this assessment and consultation.

- *In the event that sites are discovered after sale award, the Contracting Officer may interrupt the*

Purchaser's operations. (reference BT6.24 - Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources)

Public Health/Safety

During contract operations, all appropriate OSHA and other safety precautions would be taken to minimize risks to the public. Adherence to these precautions is a standard requirement in the contract for the successful bidder. In addition, the contractor would post warning signs on the road to alert the public. To ensure summer visitors are forewarned about hauling and/or other activities associated with the project, safety-related signs would be installed along the 559 road.

- *The Purchaser has responsibility for compliance with safety requirements for Purchaser's employees. Purchaser is also required to furnish and maintain temporary traffic controls sufficient to warn of potentially hazardous conditions. (reference BT6.33 - Safety)*

CONDITIONS OF SALE

Silvicultural Prescriptions:

The silvicultural prescription and marking guide for this sale was prepared by Mark Krabath, a certified Forest Service silviculturist. The signed prescription is included in the pre-sale folder. The selected management method for this stand is a commercial thinning with a restoration emphasis.

Marking and Volume Determination Summary:

This sale implements one planned timber sale unit under the Chicken Creek Fuels Reduction and Forest Health Restoration Project consisting of ± 60 acres. The cutting unit was flagged with orange flagging, marked in Orange tracer paint, and GPS'd to determine the area. A detailed GPS acreage determination report is included in the presale folder and includes the specifications that were used to ensure the accuracy of the GPS data since this is used to determine the final sale volume.

The unit boundaries were marked with Orange tracer paint using procedures specified in the marking guide and R2 Timber Cruising Handbook. Paint used for this marking was **Orange "Type-A" Lot #S0793**.

The included timber was designated with a "Leave Tree" (LTM) system. Leave trees within the unit were designated by using Orange tracer paint (Type-A Lot #S0793) marks at or above eye level with one additional mark below stump height. All marking was completed during the summer of 2009. Merchantable volume was then plot cruised from the unmarked trees. The Mockingjay Timber Sale Cruise Plan Amendment contains detailed information about the cruise design and implementation. Matt Rathbone, a certified cruise designer, prepared the plan. Ashton Hargrave, a qualified and advance cruiser was the Responsible Cruiser for the sale. The sale was estimated to have a value less than \$5,000. Sampling error standards do not apply to sales of this value, however, the volume must still be determined in an economical and defensible manner (R2 Supp. FSH 2409.12, Section 41.1). To meet the requirements to produce a "defensible" cruise, the inventory for this sale was designed to meet a target Sale-as-a-Whole sampling error standard of less than 40.0% at the 95% confidence interval. The sampling error of the final cruise is 36.59%. A detailed cruise printout is included in the pre-sale folder.

Harvest Operations:

The sale unit can be harvested with ground mechanized equipment. The area is well roaded so no new permanent roads will be built as part of the sale. The volume can be efficiently removed by using NFSR 385 and NFSR 385.D as well as several existing unauthorized roadbeds that traverse the area. The existing closed roadbeds and any new short spurs or temporary roads that are constructed will be treated as temporary roads in the contract and closed by the Purchaser after use. A detailed logging plan and map are included in the presale folder.

Regeneration:

All the units will be prescribed burned after harvest to reduce the natural and created fuels, as well as to create conditions more favorable for the establishment of grass and pine seedling regeneration. The regeneration in the pine restoration units may be monitored after harvest and burning is completed, in order to determine if the objectives of the treatments were met. However, the harvest prescriptions for this sale do not create a reforestation need and any surveys would not be considered essential KV projects.

Associated Plans:

Brush Disposal Treatment Plan (FS-2400-62) – This BD plan describes slash treatment obligations and costs incurred by the Forest Service. Deposits will be collected from the Purchaser to cover the Forest Service cost of burning the resulting slash piles.

Sale Area Improvement (K-V Collection) Plan (FS-2400-50) – describes improvement projects within the Sale Area that may be funded through timber sale receipts. In this sale, the projects to be completed with K-V funds are described in the Sale Area Improvement Plan Narrative Statement. Adequate K-V funding for all non-essential K-V work may be supplemented with other funding if available.

Salvage Sale Fund Plan (FS-2400-51) – This sale was designed to harvest only live products, so no SSF Plan will be prepared and no stumpage receipts will be collected into the Forest Salvage Fund.

TIMBER APPRAISAL

Current Appraisal Base Data

BULLETIN NO. BU230213 (effective February 19, 2013)			
BASE DATA PERIOD: 1st Qtr CY11 – 4th Qtr CY12			
APPRAISAL BASE PERIOD: 6-12			
BASE INDEX (November 2012) (per MBF) White Woods - 339.25			
BASE INDEX Adjusted to CCF (WWPA-B): 161.14			

BASE PRICE/COSTS			
SPECIES:	PP Saw	PP POL	
Adjusted Base Period Price:	1.00¹	1.00	
Base Skid-Yard Cost	103.32	n/a	
Base Haul	68.71	n/a	
Base Road Maintenance	4.52	3.01	
Base Slash	2.14	3.25	
Base Temp Roads	2.32	1.69	

¹Modification of Minimum Rates and Utilization Standards

In an attempt to improve the marketability of ponderosa pine in Colorado, a request was made to the Regional Forester to modify both the minimum rate and utilization standard for ponderosa pine sawlogs. The Regional Forester approved the request to increase the minimum diameter at breast height (d.b.h.) for ponderosa pine sawtimber products to 10.0 inches and to decrease the minimum rate for the same products to \$1.00/CCF. An appraisal will still be completed to determine the advertised rate, but the advertised rate and associated contract base rate may now be set as low as \$1.00/CCF. A copy of the approval letter dated March 20, 2013 is included in the Pre-sale folder.

Cruised Timber Volume Summary (CCF)

	Units	Sale Total or Avg.	PS (Sawlog)	PP (POL)
Gross Volume	CCF	808	764	44
Average Total Defect/Breakage	%	11.1%	11.5%	5%
Contract Volume(Net)	CCF	718	676	42
% Net Volume By Species/Group	%	100%	94%	6%
Avg. Net Volume/Tree	CF	15.9	19.5	4.0
Avg. Net Volume/Acre	CCF	12.0	11.3	0.7
Net BF/CF Ratio	n/a	4.905	4.848	5.827
Quad Mean DBH/Species	Inch	12.9	14.1	7.6
Total Number of Trees	Trees	4,518	3,458	1,060

APPRAISAL ADJUSTMENTS

Road Maintenance

The basic unit cost rates used to calculate road maintenance are from the San Juan National Forest Road Maintenance and Temporary Road Cost Guide prepared by the forest engineering staff. These rates include applicable purchaser overhead on both labor and equipment.

Pre-Haul Maintenance will be performed by the purchaser on the following roads per contract provision CT5.31# specifications. It is assumed these maintenance items will be performed once, before hauling is begun.

Level II Roads:				
NFSR 385.D (Chicken Creek –D Spur)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), Roadway Vegetation(T807), & Misc. Structures (T808)	\$ 635/mile	0.4 miles	\$ 254
Level III Roads:				
n/a				
Total Pre-Haul Maintenance:			0.4 miles	\$ 254

During Haul Maintenance will be performed by the purchaser on the following roads per contract provision CT5.31# specifications. For appraisal purposes, it is assumed these annual maintenance items will be performed during just **one** season of active hauling.

Level II Roads:				
NFSR 385.D (Chicken Creek –D Spur)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805) & Misc. Structures (T808)	\$ 390/mile	0.4 miles	\$ 156
Level III Roads:				
NFSR 385 (Chicken Creek Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), & Misc. Structures (T808)	\$ 490/mile	0.5 miles	\$ 245
Total During-Haul Maintenance:			0.9 miles	\$ 401

Post Haul Maintenance will be performed by the purchaser on the following roads per contract provision CT5.31# specifications. It is assumed these maintenance items will be performed once, after hauling is completed.

Level II Roads:				
NFSR 385.D (Chicken Creek –D Spur)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805) & Misc. Structures (T808)	\$ 390/mile	0.4 miles	\$ 156
Level III Roads:				
NFSR 385 (Chicken Creek Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), & Misc. Structures (T808)	\$ 490/mile	0.5 miles	\$ 245
Total Post-Haul Maintenance:			0.9 miles	\$ 401

Total Purchaser Maintenance Cost: \$254 + \$401 + \$401 = \$1,056

The Cost Guide was last updated in 2008, so all costs will be adjusted with an inflation factor of 2% per year for five years (1.104)

\$1,056 x 1.104 = \$1,166 or **\$1.62/CCF**

Surface Rock Replacement Deposits

FOREST PRIMARY TIMBER SALE HAUL ROADS WITH AGGREGATE SURFACE

(a) Road Number	(b) Length (Miles)	(c) Base Rate/CCF/ mile	(d) Rate/CCF/ mile w/ F.S. OH @ 26%	(e) Deposit Rate/CCF	(f) Segment CCF	(g) Total Deposit per Segment
FSR 385 (mp 0.0 - 0.5)	0.5	0.3	0.378	0.189	718	\$135.70
		0.3	0.378	0.000		\$0.00
			0.000	0.000		\$0.00
			0.000	0.000		\$0.00
			0.000	0.000		\$0.00
						\$0.00
TOTAL MOCKINGJAY TIMBER SALE						\$135.70
COST PER CCF (718 CCF)						\$0.19

Maintenance Summary:

	Total Cost	Volume	\$/CCF
Purchaser Required Performance	\$ 1,166.00	718 ccf	\$ 1.62
Surface Rock Replacement Deposits	\$ 135.70	718 ccf	\$ 0.19
TOTAL ROAD MAINTENANCE COST	\$ 1,301.70	718 ccf	\$ 1.81

Temporary Roads Construction & Decommissioning

Temporary road costs include clearing & grubbing if applicable, excavation, obliteration, seeding and mobilization costs. The basic unit cost rates used to calculate road maintenance are from the San Juan National Forest Road Maintenance and Temporary Road Cost Guide (2008) prepared by the forest engineering staff. These rates include applicable contractor overhead on both labor and equipment. See the Temporary Road Cost Estimate spreadsheet for additional details.

Temporary Road	Miles	Access Unit	Cost per Per Mile	Cost per Per Road
New Construction Temp Roads	--		--	--
Existing Non-system Roads	0.4	1	\$ 4,786	\$ 1,914
TOTAL MILES:	0.4			
		TOTAL TEMP ROADS:		\$ 1,914
		PROJECT MOVE IN:		\$ 932
		TOTAL TEMP ROAD COST:		\$ 2,846
Inflated Cost @2% per year from 2008 to 2013:				\$ 3,142
		TOTAL COST PER CCF (718 ccf):		\$4.38/ccf

Haul Costs

Sawtimber Haul Table to Montrose, CO

HAUL ROAD	CLASS	GRADE	MILES	MIN./ MI.	ADJ. FACTOR	% VOLUME	ROUND TRIP MIN.
FSR 385.D to Intersection w/ Forest Boundary	5C3	0	0.2	6.5		100%	1
Cty. Rd. 41 to HWY 184	3C2	-4%	3.1	5.8	--	100%	18
CO HWY 184 to HWY. 145	2C1	-1%	3.5	4.2	--	100%	15
CO HWY 145 to Rico, CO	2C1	+1%	38	4.2	--	100%	160
CO HWY 145 to Lizard Head Pass	2C1	+3%	9.9	4.5	--	100%	45
CO HWY 145 to CO Hwy 62	2C1	-3%	24.4	4.2	--	100%	102
CO HWY 62 to Dallas Divide	2C1	+2%	11.9	4.2	--	100%	50
CO HWY 62 to Ridgway, CO	2C1	-3%	11.1	4.2	--	100%	47
CO HWY 550 to Montrose, CO	2A1	-1%	26	3.2	--	100%	83
SUB-TOTAL							521 min.
Delay Time Added:							60 min.
TOTAL			128 mi.				581 min.

The nearest operating sawmill to this timber sale that is capable of processing this volume and species of logs into finished lumber is located in Montrose, CO. Their annual capacity is several million board feet. The Montrose mill primarily processes Engelmann spruce, lodgepole pine, Douglas fir and true fir species into 2x4 lumber and landscape timber products. Therefore, this sale will be appraised to the sawmill in Montrose, CO.

Sawtimber Sale Haul Cost = (Total Round Trip Haul Minutes) x (\$0.1130/CCF/Min.) (per Appraisal Bulletin BU230113)

$$= 581 \text{ Min.} \times \$0.1130/\text{CCF/Min.} = \mathbf{\$ 65.65/\text{CCF}}$$

P.O.L. (Ponderosa Pine) Haul Cost Adjustment

This sale contains a relatively small amount of Pine P.O.L. material (42 CCF). The Purchaser will have the option of leaving this material at the sale area under the terms of *CT2.21# - Optional Removal* and *CT6.7# - Slash Treatment* which will be included in this contract. It is believed that the most likely scenario is that the purchaser will opt to leave all the P.O.L. material at the sale area. For this reason, the purchaser's P.O.L. haul cost adjustment will be considered **zero** for appraisal purposes.

Slash Disposal

According to the provision, *CT6.7# - Slash Treatment*, the Purchaser will be required to pile slash within the unit or that is left at landings following whole-tree yarding. These piles will be burned by Forest Service force account crews when conditions allow. BD deposits will be charged to the contractor and collected to offset the cost of this burning operation. It is estimated that the burning can be accomplished in one day by a crew consisting of one GS-9 and two GS-7s. Daily rates are approximations from the WorkPlan system.

$$\begin{array}{rcl} \text{GS-9} * \$260/\text{day} * 1 \text{ man-days} & = & \$ 260 \\ \text{GS-7} * \$200/\text{day} * 2 \text{ man-days} & = & \$ 400 \\ & & \hline & & \$ 660 \end{array}$$

$$\text{Inflated to 2015} = \$660 * 1.0404 = \$ 686.66$$

$$\begin{array}{l} \text{National Collection Rate (Program Support)} = \$686.66 * 1.368 = \$939.36 \\ \text{or,} \approx \mathbf{\$1.31/\text{CCF}} \end{array}$$

Provisions in *CT6.7# - Slash Treatment* will also require the Purchaser to fell all cull sawtimber trees over 10.0" d.b.h and fell all live residual trees over 10 feet (10') in height that are damaged beyond recovery by the Purchaser's operations. An increase in felling costs is anticipated as a result of this

requirement and will be compensated for by an adjustment based on a 5% increase to the typical felling cost.

The average felling cost is estimated to constitute approximately 28.2% (FSH 2409.22, sec. 42) of the total logging cost. The base logging cost from the current Bulletin is \$103.32/CCF. 28.2% of that total yields a felling cost of \$29.14/CCF.

This felling cost is considered to be increased by a 5% adjustment factor: which = **\$ 1.46/CCF**

Total Purchaser Slash Cost: \$1.31/CCF (deposit) + \$1.46/CCF = \$2.77/CCF

Purchaser Performance Items

Erosion Control Work

CT6.601# *Erosion Control Seeding* will require the contractor to seed exposed areas of raw soil on landings and temporary roads. Costs for temporary road decommissioning is included in the Temporary Road costs section. This section will estimate the cost of seeding landings.

Number of landings needed is estimated on the Logging Plan Map at 5. The disturbed area of a landing is approximately 1/3 acres.

(5 Landings x 0.33 acres/landing = 1.65 acres or approximately 2 acres)

Per the R2-3-4 Road Construction Cost Guide, the cost for erosion control seeding & fertilizing is approximately \$360/acre with a 40% labor percentage. The reduction for Davis-Bacon wages would be: $\$360 - (\$360 \times .40 \times .25) = \$324/\text{acre}$.

This rate is further reduced by approximately 1/3 because fertilization will not be required:
 $\$324/\text{acre} \times (2/3) = \$217/\text{acre}$

$\$217/\text{acre} \times 2 \text{ acres} = \434.00 or $\$434/718 \text{ CCF} = \mathbf{\$0.60/CCF}$

Unusual Adjustments

Unusual adjustments are sale adjustments made necessary for cost or value items that are not reflected in the appraisal database. (FSH 2409.22, 51.6)

A. Sorting and Handling Adjustment:

P.O.L. size material represents approximately 23% of the stems in the sale and is distributed evenly throughout the cutting unit. FSH 2409.22, sec. 51.6 provides guidance regarding development of a

sorting and handling adjustment. An adjustment factor of 10% will be applied to the average Load Cost.

The average loading cost from 2409.22, sec. 42 of \$5.43 inflated out to 2013 is \$8.71/CCF. This loading cost is considered to be increased by a 10% adjustment factor: which = **\$ 0.87/CCF**

B. Hauling Fuel Cost Adjustment:

Per Region 2 Appraisal Bulletin effective February 19, 2013 (Bulletin #BU230213), a special appraisal adjustment representing the increased cost of fuel required for log hauling will be developed. A negative \$0.001/mile/CCF will be applied to the round trip haul distance of 256 miles to Montrose, CO.

$$256 \text{ miles} \times \$0.001/\text{mile}/\text{CCF} = \textbf{\$ 0.26/CCF}$$

C. Logging Fuel Cost Adjustment:

Per Region 2 Appraisal Bulletin effective February 19, 2013 (Bulletin #BU230213), a special appraisal adjustment representing the increased cost of fuel used in ground based logging systems will be developed. This adjustment is currently set at **-\$0.24/CCF**.

Summary of Unusual/Other Adjustments (per CCF)

		Pond. Pine	
Erosion Control Seeding		\$ 0.60	
Sorting & Handling		\$ 0.87	
Hauling Fuel Cost		\$ 0.26	
Logging Fuel Cost		\$ 0.24	
TOTAL:		\$ 1.97	

Purchaser Liability Limit per Operations Fire (reference AT14 & BT7.41)

Firefighter Type 2 (crewmember)
AD-C Wage rate (FSH id5109.34-2012) = \$17.40/hr.

Estimated number of persons needed to operate the sale = 4
\$17.40/hr. x 12hr. day x 4 persons x 3 days = \$ 2,505.60
Rounded up to **\$2,600**

Performance Bond

The minimum Performance Bond for this sale shall be the greater of either the estimated performance bond amount based on the appraised value or the calculated cost of the estimated work required assuming the Purchaser quit operations before completing the entire sale.

The estimated Performance Bond Amount Is:

Appraised Value = $\$772.08 \times 0.1 = \77.21 (rounded up to \$ 100.00)

The calculated Performance Bond Amount Is:

-Post Haul road maintenance on approx. 1/2 of system roads (from pg. 10) = \$ 221

-Obliterate approximately 1/2 of the estimated temp roads needed:
0.2 miles (from pg. 11) $\times \$1,024/\text{mile} = \205

-Complete approximately 1/2 of the estimated erosion control seeding:
 $\$434 \text{ (from pg. 13)} / 2 = \217

$\$221 + \$205 + \$217 = \643.00 (rounded up to \$700.00)

The minimum Performance Bond amount for this sale will be **\$ 700.00**